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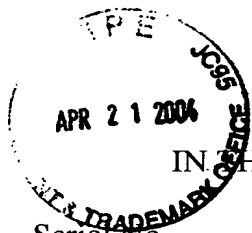
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No. : 10/021,456  
Applicant : Herbert Hartgrove et al.  
Filed : December 13, 2001  
TC/A.U. : 1771  
Examiner : Jenna Leigh Befumo

Confirmation No.: 2158

Title : Flame-Retardant Imaged Nonwoven Fabric

Docket No. : PGI6044P0281US  
Customer No. : 32116

Mail Stop RCE  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

RESPONSE

Sir:

Responsive to the Official Action mailed January 21, 2004, applicants hereby respectfully traverse the Examiner's rejection of the pending claims under 35 U.S.C. §112.

Applicants submit herewith copies of Request for Chemical Review which relate to the commercially available binder compositions referenced in applicants' Specification, including Pyron 6135 and Pyron 6139, both of which are commercially available from Chemonic Industries, Inc., specifically identified at page 10 of applicants' Specification. It is respectfully submitted that this documentation demonstrates the commercial availability of the type of compositions that can be employed for practicing applicants' invention, and that those skilled in the art would be familiar with sources for such compositions, as well as the nature of the compositions themselves.


Application No. 10/021,456  
Response dated April 21, 2004  
Reply to Office Action of January 21, 2004

Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. §112 can be withdrawn since it is believed that applicants' Specification is fully enabling for those skilled in the art.

Since the pending claims are not otherwise rejected, it is respectfully submitted that claims 8-15 are in condition for formal allowance, and such action is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they may be reached at the number indicated below.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

By   
Stephen D. Geimer, Reg. No. 28,846

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
500 West Madison Street, Suite 3800  
Chicago, Illinois 60661-2511  
312/876-1800  
April 21, 2004

# REQUEST FOR CHEMICAL REVIEW

☒ **Approved** - See PART II for Approval Conditions ☐ **Not Approved** - See PART II for Reasons CRC#: 00495

(NOTE: As you move into each new information field in this form, see instructions that will appear at bottom of computer screen.)

## PART I - All Sections Must Be Completed By Requestor

☒ Benson ☐ Bonham ☐ Dayton ☐ Gainesville ☐ Landisville ☐ Mooresville ☐ North Little Rock ☐ Rogers ☐ Waynesboro  
Requestor(s): Herb Hargrove Date Submitted: 02/11/00

List all departments who will evaluate, use, and/or potentially be exposed to this material in a foreseeable emergency:  
Pilot Line; A1

List plant contractors/vendors that will use this chemical: Updw, Superba, Armstrong

Vendor(s): Chemionics Ind.

Manufacturer(s): Same

Chemical Trade Name as Listed on MSDS: Pyron 6135

Chemical or Generic Name: FR Latex Compound

This is for: ☐ Plant ☒ Development ☐ Research ☐ One-time use for a specific project

Category: Raw Material: ---- Adhesive/Binder Not a Raw Material: ----

How will this material be used?

Padded on polyester fabrics.

Regular order amount: 50 Unit: Lbs. Max. onsite amount: 55 Unit: Gal.

Container: Drum - fibre Container ---- Container ---- Container ----

How will this chemical be handled, in preparation, use, and disposal?  
Normal chemical handling as with other binders.

How could personnel be exposed to it: ☒ Eyes ☒ Skin ☒ Inhale (dust/particulate/vapor/mist/fume) ☐ Swallow

Conditions of Use: Temperature/Duration: 350F/1Min  
Pressure/Duration: Ambient

Will material be mixed with other substances? ☐ No ☒ Yes: List the materials and their proportions on next line  
Chemwet MQ-2 0.5%; Repair 3700 1%; Antimigrant 942 3.0%; Defoam 525 0.25%; Pyron 3027 10%

Product(s) to be made using this material: FR Miratec Fabrics

Proposed market end uses for these products: Industrial, Commercial Apparel

## PART II - To Be Completed by Chemical Review Committee

NOTE: If this material is a raw material for one of our products, products containing it must be submitted for Product Safety & Regulatory evaluation prior to shipping the product to customers for evaluation.

☒ Approved for intended use under below conditions ☐ Not approved for intended use - see reasons below

HAP's, TAP's, and/or VOC's: (If any, must maintain accurate record of usage for annual emissions inventory.)

None NFPA Hazard Ratings: Fire-0; Health-1; Reactivity-0

Environmental: Use all of material. Waste containing this material ☐ is ☒ is not hazardous as defined by RCRA 40 CFR 261.

Use all of material. Unused material and waste finish containing this material must be processed through the belt press dewatering system prior to discharging to sewer.

Safety: Follow safety conditions on MSDS. Classified as ☐ Not Hazardous ☒ Hazardous under HAZCOM. Reasons if hazardous:  
May cause eye and skin irritation. Follow safety conditions listed on Material Safety Data Sheet. Conduct documented employee MSDS training prior to use.

[ Pyron 6135 ]

Date: 02/13/00

By: John Sprouse

CHEMONIC INDUSTRIES INC.  
MATERIAL SAFETY DATA SHEET  
P.O. Box 9601  
Greensboro, N.C. 27429

PYRON 6135

CI CODE C  
date:1/00

EMERGENCY PHONE# (336) 373-0145

PRODUCT  
IDENTIFICATION

COMMON NAME: Pyron 6133<sup>5</sup>  
PRODUCT TYPE: Flame retardant latex compound  
DOT LABEL: Non-regulated

CAUTION:

MAY CAUSE EYE AND SKIN IRRITATION

NFPA HAZARD  
RATING

FIRE

HEALTH

REACTIVITY

PRECAUTIONS

0

1

0

HAZARDOUS  
COMPONENTS

COMPONENT

CAS.NO.

%

PEL

TLV

None present

SARA HAZARD  
NOTIFICATION

The following components are subject to the reporting requirements of SARA Title III Section 313:

COMPONENT

CAS. NO.

%

None present

PHYSICAL  
PROPERTIES

APPEARANCE & ODOR: Opaque white, liquid; mild odor.

SOLUBILITY IN WATER: Forms milky white emulsion.

pH: 8.0 - 9.0

SPECIFIC GRAVITY: 1.236

BOILING POINT: 100 degrees C

MELTING POINT: n/a

VAPOR PRESSURE: n/a

VAPOR DENSITY: n/a

EVAPORATION RATE: n/a

VISCOSITY: 500 - 1,500 cps

FIRE & EXPLOSION  
HAZARD DATA:

FLASH POINT: Non-flammable

METHOD USED: n/a

FLAMMABLE LIMITS: n/a

EXTINGUISHING MEDIA: Dry chemical, water, carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters must use self-contained breathing apparatus. Closed containers exposed to extreme heat may rupture due to pressure build-up.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustion in the presence of other fuels may result in the release of Hydrogen bromide and/or Bromine vapors.

EFFECTS OF OVEREXPOSURE:

INHALATION-No adverse effects have been noted, however, in poorly ventilated areas, headache and nausea could occur.  
SKIN-Direct contact could cause redness and irritation  
EYES-Redness and irritation could possible occur from contact

FIRST AID:

INHALATION-Remove subject to fresh air.  
SKIN- Remove contaminated clothing and wash thoroughly with soap and water.  
EYES- Immediately flush with plenty of water for 15 minutes.  
INGESTION-Induce vomiting and get medical attention.  
LISTED AS POSSIBLE CARCINOGEN?: no

PRECAUTIONS FOR  
SAFE HANDLING  
AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:  
Clean area of spill with water. Floor may be slippery, use care to avoid falling. Stop spill at source, dike and contain with inert absorbent. Transfer to containers for disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep from freezing or extreme heat. Keep top on containers when not in use.

WASTE DISPOSAL METHOD: In accordance with local, state, and federal regulations concerning disposal of non-hazardous waste. Keep waste out of municipal sewers and open bodies of water.

OTHER PRECAUTIONS: In general, minimal health and safety hazards are expected from use of this product. Use reasonable care to avoid skin and eye contact.

REACTIVITY DATA

STABILITY: Stable  
CONDITIONS TO AVOID: n/a

HAZARDOUS POLYMERIZATION: Will not occur  
CONDITIONS TO AVOID: n/a

INCOMPATIBILITY: n/a

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon dioxide, carbon monoxide, hydrogen bromide, bromine vapors and traces of monomers.

CONTROL MEASURES

RESPIRATORY PROTECTION: None if good ventilation is maintained, otherwise use NIOSH/MSHA approved air supplied respirator.

VENTILATION: Use local exhaust and mechanical

PROTECTIVE GLOVES: Rubber

EYE PROTECTION: Chemical splash goggles or glasses

OTHER PROTECTIVE EQUIPMENT: As required by your company.

This information is offered solely for user consideration, investigation and verification. We provide no warranty and assume no responsibility for the accuracy or completeness of the data contained herein.

# REQUEST FOR CHEMICAL REVIEW

☒ **Approved** - See PART II for Conditions    ☐ **Not Approved** - See PART II for Reasons    CRC#: 00511

(NOTE: As you move into each information field in this form, see instructions that will appear at very bottom of computer screen.)

PART I - ALL Sections Must Be Completed By Requestor			
<input checked="" type="checkbox"/> Benson <input type="checkbox"/> Bonlam <input type="checkbox"/> Dayton <input type="checkbox"/> Gainesville <input type="checkbox"/> Landisville <input type="checkbox"/> Mooresville <input type="checkbox"/> North Little Rock <input type="checkbox"/> Rogers <input type="checkbox"/> Waynesboro			
Requestor(s): H. Hartgrove		Date Submitted: 05/05/00	
List <b>all</b> departments who will evaluate, use, <u>and/or</u> potentially be exposed to this material in a foreseeable emergency: pd/ts, Pilot Line, A-1			
List plant contractors/vendors that will use this chemical: SUPERBA			
Vendor(s): CHEMONICS IND.			
Manufacturer(s): SAME AS ABOVE			
Chemical Trade Name as Listed on MSDS: PYRON 6139			
Chemical or Generic Name: FLAME RETARDANT LATEX			
This is for: <input type="checkbox"/> Plant <input checked="" type="checkbox"/> Development <input type="checkbox"/> Research <input type="checkbox"/> One-time use for a specific project			
Category: Raw Material: Adhesive/Binder    Not a Raw Material: ----			
How will this material be used? Padded on polyester fabrics to impart Flame Retardancy			
Regular order amount: 5    Unit: Gal.    Max. onsite amount: 900    Unit: Lbs.			
Container: Pail/Bucket    Container: Drum - Metal    Container: ----    Container: ----			
How will this chemical be handled, in preparation, use, and disposal? Normal chemical handling as with other binders			
How could personnel be exposed to it: <input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input type="checkbox"/> Inhale (dust/particulate/vapor/mist/fume) <input type="checkbox"/> Swallow			
Conditions of Use: Temperature/Duration: 410 1 MIN Pressure/Duration: N/a			
Will material be mixed with other substances? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes List the materials and their proportions on next line CHEMWET MQ2 2%, DEFOAM 525 0.25%, CHEMONIC TH-22 3.0%			
Product(s) to be made using this material: Miratec fabrics			
Proposed market end uses for these products: APPAREL TRIM, COMMERCIAL FABRICS			
PART II - To Be Completed by Chemical Review Committee			
NOTE: If this material is a raw material for one of our products, products containing it must be submitted for Product Safety & Regulatory evaluation prior to shipping the product to customers for evaluation.			
<input checked="" type="checkbox"/> Approved for intended use under below conditions <input type="checkbox"/> Not approved for intended use - see reasons below			
HAP's, TAP's, and/or VOC's: (If any, must maintain accurate record of usage for annual emissions inventory.) None    NFPA Hazard Rating: Fire-0, Health-1, Reactivity-0			
Environmental: Use all of material. Waste containing this material <input type="checkbox"/> is <input checked="" type="checkbox"/> is not hazardous as defined by RCRA 40 CFR 261. Use all of material. Keep unused material out of drains, collect for proper disposal. Waste binder containing this material must be processed through belt press dewatering system prior to discharging to sewer.			
Safety: Follow safety conditions on MSDS. Classified as <input type="checkbox"/> Not Hazardous <input checked="" type="checkbox"/> Hazardous under HAZCOM. Reasons if hazardous: May irritate eyes and skin. Follow safety conditions listed on Material Safety Data Sheet. Conduct documented employee MSDS training prior to use.			
[ pyron 6139 ]		Date: 05/12/00	By: John Sprouse

CRC00511

# Chemonic Industries Incorporated

## Material Safety Data Sheet

PO Box 8801  
Greensboro, NC 27429

Pyron 6139

March, 2000

Emergency Phone Number: (336) 373-0145

### Product Identification

Common Name: Pyron 6139  
Product Type: Flame Retardant Compound  
DOT Label: Non-regulated

Caution: **MAY CAUSE EYE AND SKIN IRRITATION**

### NFPA Hazard Rating

Fire  
0

Health  
1

Reactivity  
0

Protective Equipment  
2

### Hazardous Components

<u>Component</u>	<u>CAS Number</u>	<u>%</u>	<u>PEL</u>	<u>TLV</u>
None Present				

### SARA Hazard Notification

The following components are subject to the reporting requirements of Section 313 of SARA Title III:

<u>Component</u>	<u>CAS Number</u>	<u>%</u>
None Present		

### Physical Properties

Appearance & Odor: Milky white liquid, mild odor.

Solubility in Water: Forms a milky white emulsion in all proportions.

pH: 8.5 - 9.5

Specific Gravity: 1.381

Boiling Point: 100°C / 212°F

Melting Point: n/a

Vapor Pressure: n/a

Vapor Density: n/a

Evaporation Rate: n/a

Reactivity in Water: non-reactive

### Fire & Explosion Hazard Data

Flash Point: Non-flammable

Flammable Limits: Non-flammable

Extinguishing Media: For dried solids, use water, foam, Carbon dioxide, or dry chemical media.

Special Fire Fighting Procedures: Closed containers exposed to extreme heat may rupture due to pressure build up.

Unusual Fire and Explosion Hazards: Material can splatter above 100°C or 212°F.  
Dried polymer films can burn.



## INFORMATION

### EFFECTS OF OVEREXPOSURE:

INHALATION-In poorly ventilated areas, irritation to nose, throat and respiratory tract may occur. Symptoms-nausea and/or dizziness

SKIN-Direct contact could cause mild irritation. Existing dermatitis may be aggravated by exposure.

EYES-Direct contact could cause redness, tearing or blurred vision.

### FIRST AID:

INHALATION- Remove to fresh air.

SKIN-Wash thoroughly with soap and water. Remove contaminated clothing.

EYES-Immediately flush with plenty of water for 15 minutes, lifting lids. Get medical attention.

INGESTION- Drink large quantities of water or milk. Get prompt medical attention.

LISTED AS POSSIBLE CARCINOGEN?: no

## PRECAUTIONS FOR SAFE HANDLING AND USE

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Clean area of spill with water. Floor may be slippery, use care to avoid falling. Stop spill at source, dike and contain with inert absorbent. Transfer to containers for disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep from freezing or extreme heat. Keep top on containers when not in use.

WASTE DISPOSAL METHOD: In accordance with local, state, and federal regulations concerning disposal of non-hazardous waste. Keep waste out of municipal sewers and open bodies of water.

OTHER PRECAUTIONS: In general, minimal health and safety hazards are expected from use of this product.

## REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid strong alkali agents.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: n/a

INCOMPATIBILITY: Strong oxidizing agents

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

## CONTROL MEASURES

RESPIRATORY PROTECTION: None if good ventilation is maintained, otherwise use NIOSH/MSHA approved air supplied respirator.

VENTILATION: Use local and mechanical exhaust methods

PROTECTIVE GLOVES: Impervious

EYE PROTECTION: Chemical splash goggles or glasses

OTHER PROTECTIVE EQUIPMENT: As required by your company.

This information is offered solely for user consideration, investigation and verification. We provide no warranty and assume no responsibility for the accuracy or completeness of the data contained herein.